REMARKS

Applicants would like to thank Examiner Roane for his time and suggestions during the telephone interview conducted on July 13, 2005. They is greatly appreciated.

This application has been revised in light of the Final Office Action mailed on March 1, 2005. Claims 20-36 are pending in the application with claims 20 and 31 being in independent form. By the present Amendment, Claims 20-23, 25, 30, 31 and 36 have been amended in part. Specifically, in Claims 20 and 31, Applicants now recite the step of advancing the thermal transmitting element of the thermal probe within the annulus fibrosus. Support for this recitation is riddled throughout the application and figures as originally filed. Accordingly, no new matter is believed to be introduced by the amendments. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Claim Rejection under 35 U.S.C. § 112

In the Office Action, Claims 31-36 were rejected under 35 U.S.C. §112 first paragraph as failing to comply with the enablement requirement. Applicants have hereby amended Claim 31 to remove the words "puncture and" from the claim language. Therefore, reconsideration of the rejection under 35 U.S.C. § 112, first paragraph is respectfully requested and allowance of the claims is earnestly solicited.

Claim Rejections under 35 U.S.C §102

Claims 20-25 and 29-32 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,126,682 to Sharkey et al. With regard to independent Claims 20 and 31, and Claims 21-25 and 29-32 which depend therefrom, Sharkey et al. neither teach nor suggest introducing a thermal transmitting element of a thermal probe into the annulus fibrosus of the

intervertebral disc and advancing the thermal transmitting element within the annulus fibrosus, as recited in amended Claims 20 and 31.

In contrast, the catheter disclosed by Sharkey et al. enters the intervertebral disc in the nucleus pulposus via an introducer (col. 9, lines 23-26; and FIG. 4). Since the catheter of Sharkey et al. enters the intervertebral disc in the nucleus pulposus and because "the distal portion 28 of intradiscal section 16 [of catheter 14] is designed to be incapable of piercing the annulus fibrosus 122 (col. 11, lines 21-22)," it can be appreciated that the catheter cannot enter, and especially cannot advance within, the annulus fibrosus upon exiting the introducer in the nucleus pulposus. Rather, the catheter of Sharkey et al. is designed to be inserted into the nucleus pulposus, "advanced through the nucleus pulposus and around an inner wall of an annulus fibrosus" while "the applied force is insufficient for the intradiscal section to puncture the annulus fibrosus" (col. 4, lines 20-24). The "inner wall of the annulus fibrosus" is defined in col. 7, lines 45-63 of Sharkey et al. as being "the transition zone between the annulus fibrosus and the nucleus pulposus." The specification does not teach the catheter advancing beyond this transition zone and into the annulus fibrosus. In fact, the specification of Sharkey et al. teaches away from the catheter entering the annulus fibrosus: "Advancement of the catheter 14, combined with increased resistance to advancement at the annulus fibrosus, causes the tip of the intradiscal section to bend relative to the longitudinal axis of introducer 12 when the intradiscal section contacts the inner wall of the annulus fibrosus 122" (col. 11, lines 11-16).

Additionally, the method disclosed by Sharkey et al. includes introducing the catheter into the nucleus pulposus and advancing the catheter along the transition zone, without puncturing the inner wall of the annulus fibrosus. Therefore, because the catheter of Sharkey et al. is initially placed in the nucleus pulposus (col. 11, lines 3-5), because the catheter cannot pierce the annulus fibrosus (col. 11, lines 21-22), and because the tip of the catheter is

configured to bend upon contact of the annulus fibrosus (col. 11, lines 11-16), the catheter of Sharkey et al. can not be advanced within the annulus fibrosus, as Applicants recite.

Accordingly, Claims 20 and 31, along with Claims 21-25, 29-30 and Claim 32, which depend therefrom, respectively, are believed to be patentably distinct over Sharkey et al. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of the Claims is earnestly solicited.

The apparatus and method disclosed by Applicants represent "a more direct approach to the posterior/lateral portions of the disc than a more circuital approach involving delivering a probe into the center of the disc [nucleus pulposus] and then arcing the probe around through an anterior or anterior-lateral pathway" (page 14, lines 10-12).

Claim Rejection under 35 U.S.C. § 103

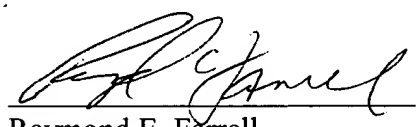
Claims 26-28, 33 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharkey et al. in view of U.S. Patent No. 5,084,043 to Hertzmann et al. It is respectfully submitted that Claims 26-28, 33 and 34 are patentable for at least the reasons that independent Claims 20 and 31 are patentable, as discussed hereinabove. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of the claim is earnestly solicited.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely claims 20-36, are believed to be in condition for allowance and patentably distinguishable over the art of record. Accordingly, early and favorable consideration of this application is respectfully requested.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, he is requested to call the Applicant's undersigned attorney.

Respectfully submitted,



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